

REMARKS/ARGUMENTS

Claims 1-18, 23, and 36 have been subject to a final office action. In response, the Applicant requests entry of the foregoing amendment. Claims have been amended and canceled to further articulate the invention within the scope of the disclosure. Currently pending claims are 1-10, 12-18, 23 and 36. No new claims have been added.

Currently pending claims 1-10, 12-13, 15, 18, 23, and 36 stand rejected under 35 USC § 103(a) over Ramsay et al. (U.S. Patent No. 4,757,374) in view of newly-cited reference to Lee (U.S. Patent No. 5,975,705). The Applicant respectfully request withdrawal of the final rejection and full consideration of the traversal of the final rejection, noting also amendments to claims 1 and 12 that clarify inventive distinctions. The Applicant submits that citation of new art without allowing the Applicant an opportunity to fully vet the new reference is improper.

The present application is one of a series of related patent applications based on similar disclosures that address techniques for transferring digitally authored moving picture content of extremely high resolution to a movie film. This and other claimed inventions represent a departure from the low resolution video-oriented telecine techniques of fifty years ago, as well as from much slower and more expensive and complex laser scribing techniques. This technique has gained commercial success and is now used commercially in the making of theater-quality movie films from digital sources.

The series of related patent applications each address different aspects of the digital media to high-resolution film transfer process. To further focus on the aspect of the invention, the claims in this application have been amended to highlight an important feature of the invention, namely, that a single frame of film media can be exposed to separate color component images.

This invention should not be confused with the plethora of art related to the telecine process, including that of the primary reference to Ramsay. The Applicant submits that those references are largely irrelevant for reasons herein further articulated.

The prior art to which this invention is addressed and is to be contrasted is the laser scribe technique of writing digital data with scanning multicolor lasers onto film. By

contrast, this invention provides that the digital data be written to a display device, wherein separate color component images are photographed onto a frame of movie film. In the most general embodiment (claim 1), an alignment unit is operative to position a flat panel display device with respect to a film recording device such that registration of each color component of each pixel in the image is positionally repeatable.

In a further embodiment (e.g., claim 2), an external illumination source is configured to provide illumination to the flat panel display in order to enhance illumination of the images so that the spatial resolution is not substantially degraded when they are photographed. There is nothing of which the Applicant is aware that did anything like this prior to this invention.

Heretofore digital imagery has been criticized as lacking in spatial and depth resolution as compared to film. Conventional photographing of digital images has heretofore been thought not to be able to compete with laser-scribe-based recording to film. However, laser scribing is extremely slow, cumbersome, and expensive. This invention has taken a different approach, against conventional wisdom, to photograph to movie film from a high resolution digital flat panel display device, a source that has not previously been used in this manner to make films of digital movies. It is believed that this invention enables image recording to be speeded up substantially while preserving spatial, color, and depth resolution created by the source material.

The primary reference cited against all claims is a patent to Ramsay et al., U.S. Pat. No. 4,757,374. This same patent has been cited in sister cases to the present application. The Applicant respectfully traverses Ramsay and contends that it does not suggest the present invention in any meaningful way, particularly as now amended.

Ramsay has been incorrectly characterized as representing an apparatus for registering images from a source flat panel display device to individual frames of continuous movie film media. The Applicant respectfully disputes such a characterization and submits that proper understanding of the Ramsay reference renders moot the 103 rejections. The Applicants will therefore focus on the Ramsay reference.

In relevant portions, Ramsay teaches a telecine device, namely a device to register *projected, still, analog* images onto *moving* film or video in real-time motion. In other words, the still images are individual still diapositive slides and/or still frames projected onto a screen or through a lens system for registration as images in freeze-frame motion. The image is registered on moving film and evidently also onto videotape. This type of embodiment clearly teaches away from direct, still-source-to-still-target recording, where a frame is comprised of separate color component images. To make it clearer that Ramsay does not address this intended claim scope, claims 1 and 12, as well as other claims, have been amended to reflect these distinctions. The Applicant therefore submits that the citation of the Ramsay reference is now rendered moot as to the intended scope of the present claims.

Regarding claim 2 respecting an external illumination source, the illumination source herein contemplated is in addition to that provided as part of the flat panel display. This illumination source is of a specific type not disclosed or suggested by the Ramsay reference. In claim 2 and similar claims, the secondary illumination source projects onto the back of the flat panel display the same still image presented on the flat panel display. While that element, when used to provide rear projection of the image, may lack the high resolution of a directly driven display, it is of sufficient resolution to increase brightness and enhance darkness and colors of the hybrid image. In Ramsay, there is no teaching of a flat panel display source, let alone a secondary illumination source serving to enhance backlight. These following passages in Ramsay either make no mention of light source (column 4, lines 62-67) or merely reference it in passing as being of a "suitable" type (column 7, lines 53-57), without any indication that illumination may be supplemental and image-specific.

The citation of Lee has been noted for its purported use of a flat panel display configured to present a color component image. However, the LCD cell is not a display suited to be photographed, is not high resolution, is very small, and it is not used or suited for displaying an image for photography. It is a triad of LCD chips used for projecting an image, primarily for metrology, for example onto a reflective screen. The chips are not the same as a display. The Applicant submits that one of ordinary skill in the relevant art would not think to combine the

two cited references in order to achieve the claimed invention, since the projected image has the same limitations as the Ramsay reference, namely, that of the projection of an image onto a screen, and not the display of an image in a flat panel display device to be photographed. The two technologies of the cited art are also incompatible; the Ramsay reference relates to telecine processes and the Lee reference relates to metrology: they don't combine!

Moreover, the position determination apparatus described by Lee requires mirrors to adjust the projection from an LCD cell for each color component image for purposes of producing a *projected* image, rather than adjustment of either a full-screen single or multiple flat panel display device configured to *display* an image.

By way of contrast, the method of the present invention allows the possibility to have multiple simultaneous component-specific displays, as well as sequential component specific displays from a single display device, each component or time slot of which can be used in a manner to produce a single monochromatic component signal in all output channels of the display device. A Red component signal can be loaded into all of its R, G and B channels simultaneously, for example, to achieve a much more intense and thus more readily exposed image. The same can be said of the Green component signal and the Blue component signal. This is a feature that is not even contemplated by the prior art.

By way of perspective and summary, this invention contributes commercially valuable new processes for producing theater-quality movie film from digital, computer-generated source material. It overcomes some of the significant problems associated with film production from digital image sources. By contrast, the cited art is unrelated to this problem.

CONCLUSION

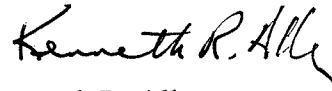
In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

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PATENT

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (650) 326-2400.

Respectfully submitted,



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